the wall, and the comparative looseness or roughness of the interior, and the consequent inequality in settling; but a consolation is extracted from it, inasmuch as the inward leaning of the walls is said to be more favourable to resist the thrust of the roof!

Mr. Brown is the architect of several very handsome churches of this class. We have seen one at Lee, near Blackheath, lately erected; another at Bedford, and another at Stamford. A sameness of character pervades them all; but perhaps Mr. Brown judges that a good thing cannot be too often repeated. Salisbury Cathedral may be taken as the model from whence these churches are reduced, or their details copied. A bold tower and spire rising to the height of 144 feet stands at the west end; the chancel is 32 feet long; an octagonal vestry stands on the north side of the chancel; a good deal of canonical order is observable in the arrangement.

WOODEN RAILWAYS.

A new invention has come before the public which offers to be of great benefit to society, viz. a new system of railroads, composed entirely of wood; a small trial line has been laid down to test the principle near Vauxhall Bridge. It is the invention of Mr. William Prosser, who has, at considerable expense, proved the system. The line laid down, though short, has yet a variety of gradients as well as curve and straight lines, as the following statement will shew:—For 33 feet fall 1 in 25; 85 feet, 1 in 400; 170 feet rise of 1 in 100; 80 feet level, 140 feet fall of 1 in 95; and 25 feet rise of 1 in 12, in which line there is a curve of 720 feet radius. The line is constructed of Scots fir rail, six inches square, prepared by Payne's process, that of exhausting the pores of the wood and injecting under great pressure metallic solution, and afterwards lime, which semi-petrifies the wood, rendering it indestructible by damp, &c. It also gives it the properties of resisting pressure and wear to a great extent, while it increases the "bite" of the wheel, enabling locomotives to ascend inclines otherwise impracticable. Of this any one who sees it will at once be convinced. This being the case, railways can be made at comparatively less cost, as the great outlay is caused by the necessity of having as level a line as possible, and instead of going round or over hills, the practice is now to go through them, to the manifest loss to the shareholders.

There is a locomotive engine at work; this engine, a common road carriage, built by Mr. John Squires, for the Albert Steam Carriage Company, is adapted for running on the wood rail by another contrivance for guiding the locomotive. This consists of an addition of anti-friction wheels fixed to each end of the carriage; these wheels run on bevil axles, and have a double flanch, the inner flanch running parallel to the inside of the rail, and the upper one parallel to the surface, but not touching it, except in case of accident to the main wheels, when they come on the rail and convey the carriage to its destination in safety.

The advantages to all are numerous:—to the shareholder an immense saving is effected in outlay, in current working expenses, in engines and carriages, and in the time of completing the line, and in consequence a quicker return for the capital invested; this will enable him to give the public cheap travelling, while they, in return, will swell his receipts by increased numbers;—to the landowner and farmer, as the land will not be so disfigured, while the facility of cheaply conveying its produce will be a great boon, not obtained by the present system;—to engineers, contractors, &c., by increased employment; as places whose population cannot support an expensive railway, may a cheaper one;—and to the public, above all, cheap, quiet, and comfortable travelling. B.

PLAN FOR MEASURING INACCESSIBLE DISTANCES.

Sir,—As it is sometimes desirable to measure an inaccessible distance when you cannot command a suitable instrument (when great accuracy was not required), I have been led to adopt the mode of measuring explained in the accompanying diagrams, which I have not seen in any book, and should you think them worth a place in your journal, I shall be glad, and perhaps I may send you another on the same subject.

I am, Sir, your most obedient servant,

Kinnahare, October 16, 1843. N. H.

To measure an inaccessible distance with the chain only.

Fig. 1. Let it be required to measure the distance between A and B, they being upon opposite sides of a river. Measure any convenient distance from B to C, suppose 100 links, the same from C to D, and from E to B, then place a pin at E, and set another at F, exactly in line with A E, and D C. Measure the distance correctly between F and D, which suppose 50 links, then you have the following proportion, viz. as F D = 50 : D E, 100 :: E B, 100, to the distance B A, which in consequence would be 200.

By the same rule the distance between two objects, both inaccessible, may be measured.

Fig. 2. The distance from A to B, and from A to C, being found by the first rule, suppose that from A to B to be 1,000, and from A to C 1,200. Take any proportion of these, say one-fifth, which for the side A B will be 200; set this number off from A to D, and set off the fifth part of 1,200 = 240 from A to E, then measure the distance between D and E, which suppose to be 120, then it is evident that the distance between B and C will be exactly five times that number, or 600.

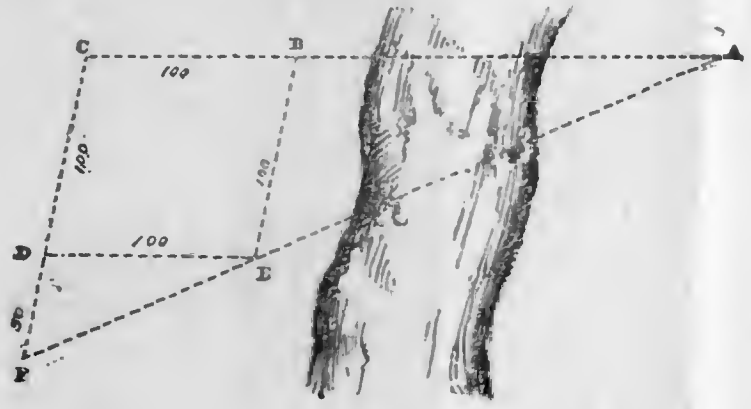

Fig. 1.

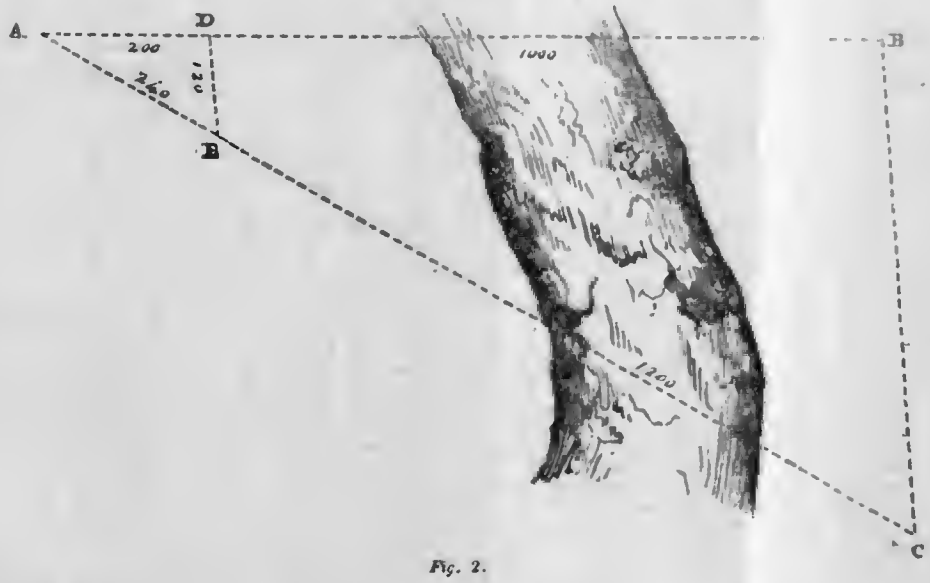

Fig. 2.